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EXAMINER
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LEE, CHRISTOPHER E

ART UNIT	PAPER NUMBER
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2112

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2

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/016,630

Applicant(s)

CHANG ET AL.

Examiner

Christopher E. Lee

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-87 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-87 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION*****Specification***

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

2. The Examiner notices that the specification doesn't include (e) BACKGROUND OF THE INVENTION. The Applicants describe the background of the invention under the title of Summary of the Invention with the applicants' invention. However, the Office prefers the arrangement of the specification as provided in 37 CFR 1.77(b) to the background description with the applicants' invention (i.e., the background of the invention is mixed up with the prior art description). Therefore, the Office suggests that the following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

**Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The disclosure is objected to because of the following informalities:

On page 33, in line 4, substitute "104A" by --140A--.

On page 45, in the last line, substitute "(Fig. 508)" by --(Fig. 5)--.

Appropriate correction is required.

### *Drawings*

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description:

Reference number 501 in lines 6, 8, 15 and 23 on the application page 44.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

The reference signs 102, 104, 106, 108, 110, 122 and 124 in Fig. 1.

The reference sign 504 in Fig. 5.

The reference sign 812 in Fig. 8B.

The reference sign 830 in Fig. 8D.

The reference sign 901 in Fig. 9A.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Objections***

6. Claims 15, 20, 65 and 79 are objected to because of the following informalities:

As to the claim 15, it recites the limitation "the output device includes an output engine" in lines 1-2, which has been recited in its parent claim 1, such as "the output device including an output engine" in lines 2-3.

As to claim 20, it recites the limitation "the uploading of the one or more device dependent components includes wireless communication" in lines 1-2. However, the claim language in the limitation is not interpretable because the method step "the uploading of the one or more device dependent components" cannot include the element "wireless communication", which could not be interpreted as a method step. Thus, the Examiner assumes the meaning of the limitation such as "a communication channel for the uploading of the one or more device dependent components includes wireless communication" for the purpose of the claim rejection based on a prior art.

As to the claim 65, substitute "the search" by --the searching--.

As to the claim 79, substitute "claim 78in" by --claim 78 in--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 12 and 33 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for receiving the device dependent output data by an output controller before delivered to the output device (See application, Fig. 1), does not reasonably provide enablement for the output controller being internal to the output device (See Claims 12 and 33). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to

make/use the invention commensurate in scope with these claims. In fact, the claims 11 and 32 recite the limitation "the device dependent output data is received by an output controller before being delivered to the selected output device" in lines 1-3, respectively. And, the dependent claims 12 and 32 of their parent claims 11 and 32 recite the limitation "the output controller is internal to the output device" in lines 1-2, respectively. However, the Examiner doubts how the output controller, which is internal to the output device, receives the device dependent output data before being delivered to the output device. Actually, the device dependent output data should be received by the output controller after being delivered to the output device because the output controller is internal to the output device.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

10 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 11-16 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim 11 recites the limitation "the selected output device" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. Therefore, the term "the selected output device" could be considered as --the output device-- since it is not clearly defined in the claims. The claims 12-16 are dependent claims of the claim 11.

20 The claim 31 recites the subject matter "the information" in line 1. There is insufficient antecedent basis for this subject matter in the claim. Therefore, the term "the information" could be considered as --an information-- since it is not clearly defined in the claims.

### ***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

25 A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 40, 46-52, 54-58, 64, 69-72, 74, 75, 78, 80 and 82-84 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al. [US 6,421,748 B1; hereinafter Lin].

10        *Referring to claim 40*, Lin discloses a method of rendering data content (i.e., printing out document at a selected output device 112 in Fig. 1; See Abstract) that is accessible from an information apparatus (i.e., user application program 101 installed at local host computer in Fig. 1), comprising: identifying (i.e., querying) a first available output device from among one or more output devices (i.e., the selected output device 112 from all the available output devices in Fig. 1) that can be accessed by said information apparatus (See Block 202 in Fig. 2 and col. 4, lines 25-30); establishing bi-directional communication (i.e., network connection) between said information apparatus and said first available output device (See col. 2, line 65 through col. 3, line 1); receiving from said first available output device information (i.e., properties and functions; See Block 708 in Fig. 7) regarding a feature (i.e., any desired property for the document output) of said first available output device (i.e., paper size, resolution, number of copies, etc.; See col. 3, lines 5-7 and col. 4, lines 38-39); determining (i.e., selecting) from said information whether said feature of said first available output device meets a predefined criterion (i.e., all the requests and information necessary for outputting the document; See col. 3, lines 9-25) for rendering said data content (See Blocks 206-207 in Fig. 2, and col. 4, lines 36-39); and transmitting said data content to said first available output device if said feature meets said predefined criterion (See Blocks 207-209 in Fig. 2, and col. 4, lines 4-19 and 38-44; i.e., wherein in fact that query the properties and functions provided by the selected output device, specify the properties of the output devices, and then set up output information controller according to specified output format inherently anticipates the method

step of transmitting said data content to said first available output device if said feature meets said predefined criterion).

*Referring to claim 46*, Lin teaches said identifying of an available output device (i.e., a selected output device 112 of Fig. 1) involves user input (i.e., Listing and Selecting interface 102 of Fig. 1).

5       *Referring to claim 47*, Lin teaches said identifying of an available output device (i.e., a selected output device 112 of Fig. 1) involves a discovery process (See Fig. 2 and col. 4, lines 23-45).

*Referring to claim 48*, Lin teaches said feature (i.e., any desired property for the document output) including information (i.e., paper size, resolution, number of copies, etc.) characterizing said output device (See col. 3, lines 1-8).

10       *Referring to claim 49*, Lin teaches said feature (i.e., any desired property for the document output) including a device dependent parameter (i.e., paper size, resolution, number of copies, etc.) related to said output device (See col. 3, lines 1-8).

*Referring to claim 50*, Lin teaches said feature (i.e., any desired property for the document output) including information (i.e., paper size, resolution, number of copies, etc.) about a service (i.e.,  
15   document output service) provided by said output device (See col. 3, lines 5-7).

*Referring to claim 51*, Lin teaches said information (i.e., paper size, resolution, number of copies, etc.) about said service (i.e., document output service) provided by said output device including quality of service (i.e., quality of copies depending on the resolution; See col. 3, lines 1-8).

*Referring to claim 52*, Lin teaches said predefined criterion (i.e., all the requests and information  
20   necessary for outputting the document; See col. 3, lines 9-25) including user input (i.e., Listing and Selecting interface 102 of Fig. 1).

*Referring to claim 54*, Lin teaches said predefined criterion (i.e., all the requests and information necessary for outputting the document; See col. 3, lines 9-25) including a predefined algorithm (i.e., optimizer 107 of Fig. 1) stored in said information apparatus (i.e., local host computer in Fig. 1).



*Referring to claim 55*, Lin teaches processing said data content to a form (e.g., image in black and white) that is compatible with said output device (e.g., black and white image device) before transmitting said data content to said output device (See col. 3, lines 44 through col. 4, line 3).

*Referring to claim 56*, Lin teaches said information apparatus including a personal computer (i.e.,  
5 local host computer; See col. 2, lines 55-61).

*Referring to claim 57*, Lin teaches said output device including a printing device (See col. 3, lines 26-29).

*Referring to claim 58*, Lin teaches said transmitted data content including compressed data (See col. 3, lines 55-57, col. 6, line 36, and Fig. 5, step 5024).

10 *Referring to claim 64*, Lin discloses a method of rendering data content (i.e., printing out document at a selected output device 112 in Fig. 1; See Abstract) that is accessible from an information apparatus (i.e., user application program 101 installed at local host computer in Fig. 1), comprising:  
searching (i.e., querying) a first available output device from among one or more output devices (i.e., the selected output device 112 from all the available output devices in Fig. 1) that can be accessed by said  
15 information apparatus (See Block 202 in Fig. 2 and col. 4, lines 25-30); upon discovery of a first available output device (See col. 2, lines 55-64), establishing bi-directional communication (i.e., network connection) between said information apparatus and said first available output device (See col. 2, line 65 through col. 3, line 1); receiving from said first available output device information (i.e., properties and functions; See Block 708 in Fig. 7) regarding a feature (i.e., any desired property for the document  
20 output) of said first available output device (i.e., paper size, resolution, number of copies, etc.; See col. 3, lines 5-7 and col. 4, lines 38-39); determining (i.e., selecting) from said information whether said feature of said first available output device meets a predefined criterion (i.e., all the requests and information necessary for outputting the document; See col. 3, lines 9-25) for rendering said data content (See Blocks 206-207 in Fig. 2, and col. 4, lines 36-39); and transmitting said data content to said first available output

device if said feature meets said predefined criterion (See Blocks 207-209 in Fig. 2, and col. 4, lines 4-19 and 38-44; i.e., wherein in fact that query the properties and functions provided by the selected output device, specify the properties of the output devices, and then set up output information controller according to specified output format inherently anticipates the method step of transmitting said data content to said first available output device if said feature meets said predefined criterion).

*Referring to claim 69*, Lin teaches said searching of a first available output device (i.e., a selected output device 112 of Fig. 1) involves user input (i.e., Listing and Selecting interface 102 of Fig. 1).

*Referring to claim 70*, Lin teaches said feature of said first available output device (i.e., any desired property for the document output) including a device dependent parameter related to said output device (i.e., paper size, resolution, number of copies, etc.; See col. 3, lines 1-8).

*Referring to claim 71*, Lin teaches said feature of said first available output device (i.e., any desired property for the document output) including quality of service (i.e., quality of copies depending on the resolution; See col. 3, lines 1-8).

*Referring to claim 72*, Lin teaches said predefined criterion (i.e., all the requests and information necessary for outputting the document; See col. 3, lines 9-25) including user input (i.e., Listing and Selecting interface 102 of Fig. 1).

*Referring to claim 74*, Lin teaches said predefined criterion (i.e., all the requests and information necessary for outputting the document; See col. 3, lines 9-25) including a predefined algorithm (i.e., optimizer 107 of Fig. 1) stored in said information apparatus (i.e., local host computer in Fig. 1).

*Referring to claim 75*, Lin teaches processing said data content to a form (e.g., image in black and white) that is compatible with said output device (e.g., black and white image device) before transmitting said data content to said first available output device (See col. 3, lines 44 through col. 4, line 3).

*Referring to claim 78*, Lin discloses a method of rendering data content (i.e., printing out document at a selected output device 112 in Fig. 1; See Abstract) that is accessible from an information apparatus (i.e., user application program 101 installed at local host computer in Fig. 1), comprising: discovering one or more available output devices (i.e., output devices) that are available to render said data content (See col. 3, lines 30-43); generating at said information apparatus a list of said one or more available output devices that are discovered (i.e., listing and selecting interface 102 of Fig. 1) and specifying at least one characteristic of each of said available output devices (See col. 2, lines 61-64); determining (i.e., selecting) from said characteristics of said one or more available output devices which of them meets a predefined criterion (i.e., all the requests and information necessary for outputting the document; See col. 3, lines 9-25) for rendering said data content (See Blocks 206-207 in Fig. 2, and col. 4, lines 36-39); and establishing communication (i.e., network connection) with each of said one or more available output devices (See col. 2, line 65 through col. 3, line 1) that meets said predefined criterion (See col. 2, lines 55-64).

*Referring to claim 80*, Lin teaches determining (i.e., selecting) which of said one or more available output devices (i.e., output devices) meet said predefined criterion (i.e., all the requests and information necessary for outputting the document) is performed by a user (See col. 7, lines 50-65).

*Referring to claim 82*, Lin teaches predefined criterion (i.e., all the requests and information necessary for outputting the document; See col. 3, lines 9-25) including quality of service (i.e., quality of copies depending on the resolution; See col. 3, lines 1-8).

*Referring to claim 83*, Lin teaches said predefined criterion (i.e., all the requests and information necessary for outputting the document; See col. 3, lines 9-25) including user input (i.e., Listing and Selecting interface 102 of Fig. 1).

*Referring to claim 84*, Lin teaches said predefined criterion (i.e., all the requests and information necessary for outputting the document; See col. 3, lines 9-25) including a predefined algorithm (i.e., optimizer 107 of Fig. 1) stored in said information apparatus (i.e., local host computer in Fig. 1).

***Claim Rejections - 35 USC § 103***

5     13.     The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

10             (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14.     This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly  
15     owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

20     15.     Claims 1, 3-10, 18 and 21-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] in view of Konishi [US 6,046,820 A].

25             *Referring to claim 1*, Lin discloses a method of rendering at an output device (i.e., printing out at a selected output device 112 in Fig. 1; See Abstract) data content (i.e., document) that is accessible from an information apparatus (i.e., user application program 101 installed at local host computer in Fig. 1), said method comprising: receiving at said information apparatus information relating to said output device (See col. 2, lines 58-64; i.e., wherein in fact that a user application program can invoke a listing and selecting interface, which provides an interface for displaying all available output devices implies that the method step of receiving at said information apparatus information relating to said output device);

establishing a channel of communication (i.e., connection) between said information apparatus and said output device (See col. 2, line 65 through col. 3, line 1); obtaining at said information apparatus one or more device-dependent components (i.e., properties and functions; See Block 207 in Fig. 2) relating to said output device (i.e., obtaining properties and functions of the selected output device; See col. 4, lines 38-39); generating at said information apparatus device-dependent output data employing at least in part one device-dependent component (See col. 3, lines 9-25); and transmitting said device-dependent output data via said communication channel to said output device for rendering (See col. 4, lines 4-19).

Lin does not expressly teach said output device including an output engine.

Konishi discloses an image forming device (See Fig. 1 and Abstract), wherein an output device (i.e., printer 2 of Fig. 1) including a printer controller (i.e., Printer Controller 21 of Fig. 1) and an output engine (i.e., printer engine 22 of Fig. 1; See col. 3, lines 41-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said printer controller and said output engine, as disclosed by Konishi, in said output device, as disclosed by Lin, so as to form said data content (i.e., print data) on a recording medium, e.g., recording paper (See Konishi, col. 3, lines 41-46).

*Referring to claim 18*, Lin discloses a method of rendering (i.e., printing out; See Abstract) data content (i.e., document) that is accessible from an information apparatus (i.e., user application program 101 installed at local host computer in Fig. 1), comprising: selecting an available output device (See Block 206 in Fig. 2 and col. 4, lines 36-37); automatically uploading to said information apparatus (See Fig. 7) one or more device-dependent components (i.e., properties and functions; See Block 207 in Fig. 2) corresponding to said output device (i.e., uploading properties and functions of the selected output device; See col. 7, lines 49-65); generating at said information apparatus device dependent output data in accordance with said one or more device-dependent components (See col. 3, lines 9-25); and transmitting

said output data from said information apparatus to said output device for rendering (See col. 4, lines 4-19).

Lin does not expressly teach said output device having a device-specific output engine.

Konishi discloses an image forming device (See Fig. 1 and Abstract), wherein an output device (i.e.,  
5 printer 2 of Fig. 1) has a printer controller (i.e., Printer Controller 21 of Fig. 1) and a device-specific  
output engine (i.e., printer engine 22 of Fig. 1; See col. 3, lines 41-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was  
made to have included said printer controller and said output engine, as disclosed by Konishi, in said  
output device, as disclosed by Lin, so as to form said data content (i.e., print data) on a recording medium,  
10 e.g., recording paper (See Konishi, col. 3, lines 41-46).

*Referring to claims 3 and 21*, Lin teaches said information apparatus including a personal  
computer (i.e., local host computer; See col. 2, lines 55-61).

*Referring to claims 4 and 22*, Lin teaches said output device including a printing device (See col.  
3, lines 26-29).

15 *Referring to claims 5 and 23*, Lin teaches said device dependent output data including  
compressed data (See col. 3, lines 55-57, col. 6, line 36, and Fig. 5, step 5024).

*Referring to claim 6*, Lin teaches said information relating to said output device being obtained  
from said output device (See col. 3, lines 1-8).

*Referring to claims 7 and 26*, Lin teaches said one or more device-dependent components (i.e.,  
20 properties and functions of the selected output device) include software code (See Block 207 in Fig. 2;  
i.e., function code).

*Referring to claims 8 and 27*, Lin teaches said one or more device-dependent components (i.e.,  
properties and functions of the selected output device) include a software application (See Block 207 in  
Fig. 2; i.e., function program).

*Referring to claim 9*, Lin teaches said one or more device-dependent components (i.e., properties and functions of the selected output device) include at least part of a device driver (i.e., universal output driver in Fig. 1 with properties and functions of the selected output device becomes a simulated device driver. Thus, the properties and functions of the selected output device should be a part of the device driver; See abstract).

*Referring to claim 10*, Lin teaches said one or more device-dependent components including information (i.e., properties) relating to said output device (See col. 3, lines 1-8).

*Referring to claim 24*, Lin teaches said selecting of an available output device (i.e., a selected output device 112 of Fig. 1) involves user input (i.e., Listing and Selecting interface 102 of Fig. 1).

*Referring to claim 25*, Lin teaches said selecting of an available output device (i.e., a selected output device 112 of Fig. 1) including said information apparatus (i.e., user application program 101 installed at local host computer in Fig. 1) discovering said output devices (See Fig. 2 and col. 4, lines 23-45).

*Referring to claim 28*, Lin, as modified by Konishi, teaches that said output device (i.e., printer 2 of Fig. 1; Konishi) is a printer and said one or more device-dependent components (i.e., properties and functions of the selected output device; Lin) include at least part of a device driver (i.e., universal output driver in Fig. 1 with properties and functions of the selected output device becomes a simulated device driver. Thus, the properties and functions of the selected output device should be a part of the device driver; See Lin, Abstract).

*Referring to claim 29*, Lin teaches said one or more device-dependent components (i.e., properties and functions of the selected output device) relate to a device driver (i.e., universal output driver in Fig. 1 with properties and functions of the selected output device becomes a simulated device driver. Thus, the properties and functions of the selected output device should be a part of the device driver; See Lin, Abstract).

*Referring to claim 30*, Lin teaches said device-dependent components (i.e., properties and functions of the selected output device) including information characterizing said output device (See col. 3, lines 1-8).

*Referring to claim 31*, Lin teaches an information (See col. 2, lines 58-64; i.e., wherein in fact that a user application program can invoke a listing and selecting interface, which provides an interface for displaying all available output devices implies that the method step of receiving at said information apparatus an information relating to said output device) characterizing said output device including an output data format identifier (i.e., paper size, resolution, number of copies, etc.; See col. 3, lines 5-7).

16. Claims 2 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] in view of Konishi [US 6,046,820 A] as applied to claims 1, 3-10, 18 and 21-31 above, and further in view of Ito et al. [US 6,529,522 B1; hereinafter Ito].

*Referring to claim 2*, Lin, as modified by Konishi, discloses all the limitations of the claim 2 except that does not teach said channel of communication including a wireless communication channel. Ito discloses a communication apparatus with wireless interfaces (See Figs. 2 and 3), wherein a channel of communication (i.e., an infrared communication channel; See col. 9, lines 39-42) between an information apparatus (i.e., digital camera 201 of Fig. 3) and an output device (i.e., printer 202 of Fig. 3) including a wireless communication channel (i.e., wireless communication between digital camera 201 and printer 202 in Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said wireless interfaces, as disclosed by Ito, in said information apparatus and output device, as disclosed by Lin, as modified by Konishi, so as said information apparatus (i.e., digital camera) to transfer said data content (i.e., image data) to said output device without cumbersome cable connection, and thus said information apparatus (i.e., digital camera) does not lose the mobility of a portable device (See Ito, col. 8, lines 51-55).



*Referring to claim 20*, Lin, as modified by Konishi, discloses all the limitations of the claim 20 including said uploading of said one or more device dependent components (See Fig. 7; Lin), except that does not teach a communication channel for said uploading including wireless communication.

Ito discloses a communication apparatus with wireless interfaces (See Figs. 2 and 3), wherein

5 a communication channel (i.e., an infrared communication channel; See col. 9, lines 39-42) including wireless communication (i.e., wireless channel between digital camera 201 and printer 202 in Fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said wireless interfaces, as disclosed by Ito, in means for rendering output contents, i.e., said information apparatus and output device, as disclosed by Lin, as modified by Konishi,  
10 so as said information apparatus (i.e., digital camera) to transfer said data content (i.e., image data) to said output device without cumbersome cable connection, and thus said information apparatus (i.e., digital camera) does not lose the mobility of a portable device (See Ito, col. 8, lines 51-55).

17. Claims 11, 13, 15, 16, 32, 34, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] in view of Konishi [US 6,046,820 A] as applied to claims 1, 3-  
15 10, 18 and 21-31 above, and further in view of Snipp [US 5,699,495 A].

*Referring to claims 11 and 32*, Lin, as modified by Konishi, discloses all the limitations of the claims 11 and 32, respectively, except that does not expressly teach said device dependent output data is received by an output controller before being delivered to said output device.

Snipp discloses a point-and-print in a distributed environment (See Abstract and Fig. 1) with Spooler 36  
20 and 40 in Fig. 2, wherein device dependent output data (i.e., document having been processed by print driver 38 in Fig. 2; See Fig. 3) is received by an output controller (i.e., print server 16 of Fig. 2, in fact, being received by Spooler 40 of Fig. 2) before being delivered to an output device (i.e., print device 14 of Fig. 2; See col. 4, lines 40-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said point-and-print feature with said spooler, as disclosed by Snipp, in said information apparatus and output device, as disclosed by Lin, as modified by Konishi, for the advantage of providing a point-and-print capability with scheduling rendering jobs (i.e., printing jobs), which would allow a user to print said data contents (i.e., document) on said output device (i.e., remote printer) simply by selecting said output device (i.e., printer) from a list of output devices (i.e., printer devices) that are available to render (i.e., print) said data contents (i.e., document; See Snipp, col. 2, lines 44-49 and col. 9, lines 7-8).

*Referring to claims 13 and 34*, Snipp teaches said output controller is a server (i.e., printer server 16 of Fig. 2).

*Referring to claims 15 and 36*, Konishi teaches said output device (i.e., printer 2 of Fig. 1) including an output engine (i.e., printer engine 22 of Fig. 1; See col. 3, lines 41-42), wherein converting said output data content (i.e., converting the print data) into a form compatible with said output engine (See col. 3, lines 42-46).

*Referring to claims 16 and 37*, Konishi teaches said output device (i.e., printer 2 of Fig. 1) is a printer and includes a printer controller (i.e., Printer Controller 21 of Fig. 1), and said method further including the step of converting said output data (i.e., print data) into a form compatible with said printer controller (See col. 3, lines 41-46).

18. Claims 14 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] in view of Konishi [US 6,046,820 A] and Snipp [US 5,699,495 A] as applied to claims 11, 13, 15, 16, 32, 34, 36 and 37 above, and further in view of Surbrook [US 5,166,809 A].

*Referring to claims 14 and 35*, Lin, as modified by Konishi and Snipp, discloses all the limitations of the claims 14 and 35, respectively, except that does not expressly teach said output controller performs, at least partially, raster image processing on said data content.

Surbrook discloses an apparatus for digital halftoning (See col. 1, lines 11-18), wherein a data content (i.e., color photo image 14 of Fig. 1) is received by an output controller (i.e., digital signal processor 10 of Fig. 1), which performs, at least partially, raster image processing on said data content (See col. 12, lines 19-21).

5 Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said output controller (i.e., digital signal processor), as disclosed by Surbrook, in said output controller (i.e., print server), as disclosed by Lin, as modified by Konishi and Snipp, for the advantage of providing a quality halftone color reproduction with relatively low resolution digital data output devices (See Surbrook, col. 12, lines 21-24).

10 19. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] in view of Konishi [US 6,046,820 A] as applied to claims 1, 3-10, 18 and 21-31 above, and further in view of Mitani [US 6,654,135 B2].

*Referring to claims 17 and 19*, Lin, as modified by Konishi, discloses all the limitations of the claims 17 and 19, respectively, except that does not teach the step of providing payment information from  
15 said information apparatus to pay for said rendering provided by said output device.

Mitani discloses a printing control system (See col. 1, lines 11-16 and Fig. 1), wherein said system performs the step of providing payment information (i.e., payment details [#Payment]) from an information apparatus (i.e., client computer 101 of Fig. 1) to pay for rendering provided by an output device (See col. 9, line 58 through col. 10, line 5).

20 Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said service payment scheme, as disclosed by Mitani, in said method, as disclosed by Lin, as modified by Konishi, so as to compensate for the cost of said rendering service (i.e., printing service) at said output device, which is a common sense to one of ordinary skill in the art.

20. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] in

view of Konishi [US 6,046,820 A] and what was well known in the art, as exemplified by Lach [US 6,363,452 B1].

*Referring to claim 38*, most of the claim limitations have already been discussed/addressed with respect to claim 18, with the exception of said method of claim 18 being implemented in software, which is stored in a computer readable medium.

The Examiner takes Official Notice that said method steps of the claim 18 could be achieved in all software implementation with the same or equivalent results, using appropriate program codes (i.e., processor instructions), which are stored in a computer readable medium (i.e., memory), is well known to one of ordinary skill in the art, as evidenced by Lach, at col. 12, lines 3-9.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have implemented said method, as disclosed by Lin, as modified by Konishi, in software, so as to store said appropriate program codes (i.e., processor instructions) into said computer readable medium (i.e., memory) since it would allow a better flexibility of an implementation than a hardware implementation.

21. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] in view of Konishi [US 6,046,820 A] as applied to claim 38 above, and further in view of Mitani [US 6,654,135 B2].

*Referring to claim 39*, Lin, as modified by Konishi, discloses all the limitations of the claim 39 except that does not teach software for providing payment information from said information apparatus to pay for said rendering provided by said output device.

Mitani discloses a printing control system (See col. 1, lines 11-16 and Fig. 1), wherein said system performs the step of providing payment information (i.e., payment details [#Payment]) from an information apparatus (i.e., client computer 101 of Fig. 1) to pay for rendering provided by an output device (See col. 9, line 58 through col. 10, line 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said service payment feature, as disclosed by Mitani, in said software for rendering said data content, as disclosed by Lin, as modified by Konishi, so as to compensate for the cost of said rendering service (i.e., printing service) at said output device, which is a common sense to one of ordinary skill in the art.

22. Claims 41, 42, 44, 65, 67 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] as applied to claims 40, 46-52, 54-58, 64, 69-72, 74, 75, 78, 80 and 82-84 above, and further in view of Takahashi [US 6,246,486 B1].

*Referring to claim 41*, Lin discloses all the limitations of the claim 40 except that does not expressly teach the step of performing action if it is determined that said feature of said first available output device does not meet said predefined criterion.

Takahashi discloses a print processing method (See Abstract and Fig. 5), wherein said method comprising: determining from an information whether a feature (e.g., printer language) of a first available output device (i.e., a selected printer) meets a predefined criterion (i.e., if the printer language is supported by the selected printer) for rendering data content (See Steps S102-S103 in Fig. 5, and col. 5, lines 31-47); and performs a restart of said method to a second available output device (i.e., another printer) if it is determined that said feature of said first available output device does not meet said predefined criterion (See Steps S103, S107 and S108 in Fig. 5, and col. 5, lines 48-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said restart of said method, as disclosed by Takahashi, in said method, as disclosed by Lin, so as to instruct said information apparatus (i.e., user) to select said second available output device (i.e., another printer) by displaying a message indicating such an instruction (See Takahashi, col. 5, lines 15-19).

Accordingly, Lin, as modified by Takahashi, teaches said method in which it is determined that said feature of said first available output device does not meet said predefined criterion (See Takahashi, Steps S103, S107 and S108 in Fig. 5, and col. 5, lines 48-62), said method further comprising: identifying (i.e., querying) a second available output device from among one or more output devices (i.e., the other  
5 selected output device 112 from all the available output devices in Fig. 1; Lin) that can be accessed by said information apparatus (See Lin, Block 202 in Fig. 2 and col. 4, lines 25-30); establishing bi-directional communication (i.e., network connection) between said information apparatus and said second available output device (See Lin, col. 2, line 65 through col. 3, line 1); receiving from said second available output device information (i.e., properties and functions; See Lin, Block 708 in Fig. 7) regarding  
10 a feature (i.e., any desired property for the document output; Lin) of said second available output device (i.e., paper size, resolution, number of copies, etc.; See Lin, col. 3, lines 5-7 and col. 4, lines 38-39); determining (i.e., selecting) from said information whether said feature of said second available output device meets said predefined criterion (i.e., all the requests and information necessary for outputting the document; See Lin, col. 3, lines 9-25) for rendering said data content (See Lin, Blocks 206-207 in Fig. 2,  
15 and col. 4, lines 36-39); and transmitting said data content to said second available output device if said feature meets said predefined criterion (See Lin, Blocks 207-209 in Fig. 2, and col. 4, lines 4-19 and 38-44; i.e., wherein in fact that query the properties and functions provided by the selected output device, specify the properties of the output devices, and then set up output information controller according to specified output format implies the method step of transmitting said data content to said second available  
20 output device if said feature meets said predefined criterion).

*Referring to claim 42*, Lin discloses all the limitations of the claim 40 except that does not expressly teach the step of performing a decision if it is determined that said feature of said first available output device does not meet said predefined criterion.

Takahashi discloses a print processing method (See Abstract and Fig. 5), wherein said method comprising: determining from an information whether a feature (e.g., printer language) of a first available output device (i.e., a selected printer) meets a predefined criterion (i.e., if the printer language is supported by the selected printer) for rendering data content (See Steps S102-S103 in Fig. 5, and col. 5, lines 31-47); and providing at an information apparatus (i.e., CPU 101 of Fig. 2) a user indication (See Step S107 in Fig. 5) that said first available output device does not meet said predefined criterion (See Steps S103, S107 and S108 in Fig. 5, and col. 5, lines 48-62) in order to perform a restart of said method to a second available output device (i.e., another printer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said restart of said method, as disclosed by Takahashi, in said method, as disclosed by Lin, for the advantage of providing the user to recognize that said first available output device (i.e., the selected printer) selected by the user is incorrect, thereby enhancing ease of use (See Takahashi, col. 6, lines 1-3).

*Referring to claim 44*, Takahashi teaches providing at said information apparatus (i.e., CPU) a user indication (See Step S107 in Fig. 5) of a user-selectable option (See col. 5, lines 59-61) to attempt to identify an available output device (i.e., another printer) with a feature that meets said predefined criterion (See col. 5, line 63 through col. 6, line 1).

*Referring to claim 65*, Lin discloses all the limitations of the claim 65 except that does not expressly teach the step of providing at said information apparatus a user indication that a first available output device has not been discovered if a first available output device is not discovered in said searching. Takahashi discloses a print processing method (See Abstract and Fig. 5), wherein said method comprising: determining from an information whether a feature (e.g., printer language) of a first available output device (i.e., a selected printer) meets a predefined criterion (i.e., if the printer language is supported by the selected printer) for rendering data content (See Steps S102-S103 in Fig. 5, and col. 5,

lines 31-47); and providing at an information apparatus (i.e., CPU 101 of Fig. 2) a user indication (See Step S107 in Fig. 5) that said first available output device has not been discovered (See Steps S103, S107 and S108 in Fig. 5) if said first available output device is not discovered in searching (See col. 5, lines 48-62).

5 Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said restart of said method, as disclosed by Takahashi, in said method, as disclosed by Lin, for the advantage of providing the user to recognize that said first available output device (i.e., the selected printer) selected by the user is incorrect, thereby enhancing ease of use (See Takahashi, col. 6, lines 1-3).

10 *Referring to claim 67*, Lin discloses all the limitations of the claim 67 except that does not expressly teach the step of providing at said information apparatus a user indication of a user-selectable option to again attempt to identify an available output device.

Takahashi discloses a print processing method (See Abstract and Fig. 5), wherein said method comprising: determining from an information whether a feature (e.g., printer language) of a first available  
15 output device (i.e., a selected printer) meets a predefined criterion (i.e., if the printer language is supported by the selected printer) for rendering data content (See Steps S102-S103 in Fig. 5, and col. 5, lines 31-47); and providing at an information apparatus (i.e., CPU 101 of Fig. 2) a user indication (See Step S107 in Fig. 5) of a user-selectable option (i.e., “instructing the user to select another printer” in block S107 of Fig. 5 implies a user indication of a user-selectable option) to again attempt to identify an  
20 available output device (See col. 5, lines 48-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said restart of said method, as disclosed by Takahashi, in said method, as disclosed by Lin, for the advantage of providing the user to recognize that said first available output device (i.e., the



selected printer) selected by the user is incorrect, thereby enhancing ease of use (See Takahashi, col. 6, lines 1-3).

*Referring to claim 79*, Lin discloses all the limitations of the claim 79 except that does not expressly teach the step of determining which of said one or more available output devices meet said predefined criterion is performed automatically by said information apparatus.

Takahashi discloses a print processing method (See Abstract and Fig. 5), wherein said method comprising: determining which of one or more available output devices (i.e., printers 200, 300 and 400 in Fig. 1) meet a predefined criterion (i.e., if the printer language is supported by the selected printer) is performed automatically by an information apparatus (i.e., CPU 101 of Fig. 2; See col. 4, lines 46-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said restart of said method, as disclosed by Takahashi, in said method, as disclosed by Lin, for the advantage of providing the user to perform a correct outputting (i.e., printing) operation while said output device's predefined criterion (i.e., printer languages) of said individual output devices (i.e., printers) connected to said communication (i.e., network) are transparent to the user (See Takahashi, col. 4, line 67 through col. 5, line 3).

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] in view of Takahashi [US 6,246,486 B1] as applied to claims 41, 42, 44, 65, 67 and 79 above, and further in view of Foster et al. [US 5,596,697 A; hereinafter Foster].

*Referring to claim 43*, Lin, as modified by Takahashi, discloses all the limitations of the claim 43 except that does not teach providing at said information apparatus a user indication of a user-selectable option to cancel said rendering of said data content.

Foster discloses a method for routing items within a computer system (See col. 2, lines 25-31), wherein providing at an information apparatus (i.e., pen-based computer system 10 of Fig. 1) a user indication

(i.e., ☒ 315 of Fig. 12) of a user-selectable option (i.e., Delete 317, Print 313 and ☒ 315 in Fig. 12) to cancel a rendering of data content (See col. 10, lines 35-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said user indication of a user-selectable option, as disclosed by Foster, in said information apparatus, as disclosed by Lin, as modified by Takahashi, so as to cancel said rendering of said data content upon user's desire (See Foster, col. 10, lines 38-39 and 43-45).

24. Claims 45, 68 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] as applied to claims 40, 46-52, 54-58, 64, 69-72, 74, 75, 78, 80 and 82-84 above, and further in view of Ito [US 6,529,522 B1].

10        *Referring to claims 45 and 68*, Lin discloses all the limitations of the claims 45 and 68, respectively, except that does not teach said bi-directional communication including a wireless communication.

Ito discloses a communication apparatus with wireless interfaces (See Figs. 2 and 3), wherein a bi-directional communication (i.e., an infrared communication channel; See col. 9, lines 39-42) between an information apparatus (i.e., digital camera 201 of Fig. 3) and an output device (i.e., printer 202 of Fig. 3) including a wireless communication (i.e., wireless communication between digital camera 201 and printer 202 in Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said wireless interfaces, as disclosed by Ito, in said information apparatus and output device, as disclosed by Lin, so as said information apparatus (i.e., digital camera) to transfer said data content (i.e., image data) to said output device without cumbersome cable connection, and thus said information apparatus (i.e., digital camera) does not lose the mobility of a portable device (See Ito, col. 8, lines 51-55).

*Referring to claim 81*, Lin discloses all the limitations of the claim 81 except that does not teach said discovering of said one or more available device including a wireless communication.

Ito discloses a communication apparatus with wireless interfaces (See Figs. 2 and 3), wherein a discovering of one or more available device (i.e., connecting between digital camera 201 and printer 202

5 in Fig. 3 via an infrared communication channel; See col. 9, lines 39-42) including a wireless communication (i.e., wireless communication between digital camera 201 and printer 202 in Fig. 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said wireless interfaces, as disclosed by Ito, in said information apparatus and output device, as disclosed by Lin, so as said information apparatus (i.e., digital camera) to transfer said  
10 data content (i.e., image data) to said output device without cumbersome cable connection, and thus said information apparatus (i.e., digital camera) does not lose the mobility of a portable device (See Ito, col. 8, lines 51-55).

25. Claims 53 and 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] as applied to claims 40, 46-52, 54-58, 64, 69-72, 74, 75, 78, 80 and 82-84 above, and  
15 further in view of Hosogai [US 5,404,433 A].

*Referring to claims 53 and 73*, Lin discloses all the limitations of the claims 53 and 73, respectively, except that does not teach said predefined criterion including a predetermined default parameter stored in said information apparatus.

Hosogai discloses an image processing apparatus (See Fig. 2), wherein a predefined criterion (i.e.,  
20 parameters) including a predetermined default parameter (i.e., choices made by a program) stored in an information apparatus (i.e., image processing apparatus in Fig. 2; See col. 11, lines 3-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said predetermined default parameter, as disclosed by Hosogai, in said information

apparatus, as disclosed by Lin, for the advantage of minimizing a user setting of said predefined criterion (i.e., parameter choices), which is a common sense to one of ordinary skill in the art.

26. Claims 59, 76, 85 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] and what was well known in the art, as exemplified by Lach [US 6,363,452 B1].

5        *Referring to claims 59, 76 and 85*, most of the claim limitations have already been discussed/addressed with respect to claims 40, 64 and 78, respectively, with the exception of said method of claims 40, 64 and 78, respectively, being implemented in software, which is stored in a computer readable medium.

10        The Examiner takes Official Notice that said method steps of the claims 40, 64 and 78, respectively, could be achieved in all software implementation with the same or equivalent results, using appropriate program codes (i.e., processor instructions), which are stored in a computer readable medium (i.e., memory), is well known to one of ordinary skill in the art, as evidenced by Lach, at col. 12, lines 3-9.

15        Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have implemented said method, as disclosed by Lin, in software, so as to store said appropriate program codes (i.e., processor instructions) into said computer readable medium (i.e., memory) since it would allow a better flexibility of an implementation than a hardware implementation.

*Referring to claim 87*, all the claim limitations have already been discussed/addressed with respect to claims 80 and 85, such that said method of claim 80 would be implemented in software, which is stored in a computer readable medium.

20        27. Claims 60, 61, 63, 77 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] as applied to claims 59, 76, 85 and 87 above, and further in view of Takahashi [US 6,246,486 B1].

*Referring to claim 60*, all the claim limitations have already been discussed/addressed with respect to claims 41 and 59, such that said method of claim 41 would be implemented in software, which

is stored in a computer readable medium.

*Referring to claim 61*, all the claim limitations have already been discussed/addressed with respect to claims 42 and 59, such that said method of claim 42 would be implemented in software, which is stored in a computer readable medium.

5       *Referring to claim 63*, all the claim limitations have already been discussed/addressed with respect to claims 44 and 61, such that said method of claim 44 would be implemented in software, which is stored in a computer readable medium.

10       *Referring to claim 77*, all the claim limitations have already been discussed/addressed with respect to claims 65 and 76, such that said method of claim 65 would be implemented in software, which is stored in a computer readable medium.

*Referring to claim 86*, all the claim limitations have already been discussed/addressed with respect to claims 79 and 85, such that said method of claim 79 would be implemented in software, which is stored in a computer readable medium.

28.     Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] in  
15 view of Takahashi [US 6,246,486 B1] as applied to claims 60, 61, 63, 77 and 86 above, and further in view of Foster [US 5,596,697 A].

*Referring to claim 62*, Lin, as modified by Takahashi, discloses all the limitations of the claim 62 except that does not teach providing at said information apparatus a user indication of a user-selectable option to cancel said rendering of said data content.

20 Foster discloses a method for routing items within a computer system (See col. 2, lines 25-31), wherein providing at an information apparatus (i.e., pen-based computer system 10 of Fig. 1) a user indication (i.e., ☒ 315 of Fig. 12) of a user-selectable option (i.e., Delete 317, Print 313 and ☒ 315 in Fig. 12) to cancel a rendering of data content (See col. 10, lines 35-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said user indication of a user-selectable option, as disclosed by Foster, in said information apparatus, as disclosed by Lin, as modified by Takahashi, so as to cancel said rendering of said data content upon user's desire (See Foster, col. 10, lines 38-39 and 43-45).

- 5     29.     Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin [US 6,421,748 B1] as applied to claims 40, 46-52, 54-58, 64, 69-72, 74, 75, 78, 80 and 82-84 above, and further in view of Foster [US 5,596,697 A].

Referring to claim 66, Lin discloses all the limitations of the claim 66 except that does not teach providing at said information apparatus a user indication of a user-selectable option to cancel said rendering of said data content.

Foster discloses a method for routing items within a computer system (See col. 2, lines 25-31), wherein providing at an information apparatus (i.e., pen-based computer system 10 of Fig. 1) a user indication (i.e., ☒ 315 of Fig. 12) of a user-selectable option (i.e., Delete 317, Print 313 and ☒ 315 in Fig. 12) to cancel a rendering of data content (See col. 10, lines 35-46).

- 15     Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said user indication of a user-selectable option, as disclosed by Foster, in said information apparatus, as disclosed by Lin, as modified by Takahashi, so as to cancel said rendering of said data content upon user's desire (See Foster, col. 10, lines 38-39 and 43-45).

### ***Conclusion***

- 20     30.     The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*With regard to Processing and Printing Documents,*

Sherer et al. [US 6,449,052 B1] disclose multi-purpose image generator for driving multiple output devices.

Taylor, III et al. [US 5,867,633 A] disclose method and apparatus for processing and printing documents.

*With regard to Networked Printing,*

Snyder et al. [US 5,564,109 A] disclose remote user interface for prioritizing and selecting from a plurality of document production peripheral devices.

Nykänen et al. [US 6,285,889 B1] disclose information output system, method for outputting information and terminal devices for outputting information via mobile communication network.

Morgan et al. [US 5,220,674 A] disclose local area print server for requesting and storing required resource data and forwarding printer status message to selected destination.

Tuchitoi et al. [US 6,633,395 B1] disclose printer, printing system, print control method, storage medium used to store print control program for controlling a printer, and transmission device for transmitting print control program for controlling a printer.

Thorne [US 5,832,191 A] discloses method and apparatus for automatically enabling communication with a network printer.

Gase et al. [US 5,580,177 A] disclose printer/client network with centrally updated printer drivers and printer status monitoring.

Kovnat et al. [US 5,619,649 A] disclose networking printing system for programming a print job by selecting a job ticket identifier associated with remotely stored predefined document processing control instructions.

*With regard to Accessing Device Drivers,*

Garney [US 5,412,798 A] discloses system for enabling access to device driver residing in resource memory corresponding to coupled resource by allowing memory mapping to device driver to be executed.

Tsang et al. [US 5,613,123 A] disclose method and system for configuring and executing device drivers based on configuration requirements.

Watanabe [US 6,138,178 A] discloses controlled device storing multiple drivers that judges and downloads a particular driver corresponding to a controller's operating system having an identical or  
5 greater version number.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Lee whose telephone number is 703-305-5950. The examiner can normally be reached on 9:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark  
10 H. Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available  
15 through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

20 cel/ *cel*

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